Charleston, S. C., mentioning the discovery of a large quantity of Mammalian remains on the banks of Ashley river in that State, comprising numerous extinct genera.

June 12th.

Dr. BRIDGES in the Chair.

Dr. Keller exhibited a calculus of considerable size, taken from the bladder of a whale. He stated that calculi were frequently found in this animal, and occasionally in large numbers. Dr. Keller promised a full analysis of the present and other specimens of calculi in his possession, to be laid before the Society at a future meeting.

A communication was read from the Secretary of the American Philosophical Society, acknowledging the receipt of the last number of the Proceedings of the Academy.

June 26th.

Vice President MORTON in the Chair.

The Committee to whom was referred Dr. Leidy's remarks on the fragments of the fossil Tapir, deposited in the collection of the Academy by the late Dr. Carpenter, of New Orleans, reported in favor of publication in the Proceedings.

Tapirus Americanus fossilis.

By JOSEPH LEIDY, M. D.

There are three of these fragments; one of them, being the crown of the fourth, left, permanent premolar of the inferior maxilla, was found near Opelousas, Louisiana, and was described by Dr. Carpenter, in Silliman's Journal,* so early as the year 1842. It does not differ from the same tooth in the recent Tapirus Americanus. The other two fragments, consisting of the left half of an inferior maxillary, and the posterior portion of the left superior maxilla, were found on the banks of the Brasos river, near San Fillipe, Texas, and were described by Dr. C., in Silliman's Journal,† in the year 1846.

The two fragments did not belong to the same individual, as Dr. C. supposed, from their having been "found within a few feet of each other." The superior fragment belonged to an older individual than the inferior one, as is indicated by the condition of the teeth. They also differ in the character of their fossilization, which would make one think they could hardly have been found so near together. The superior fragment has a white chalky aspect, is soft, rather friable, and is readily cut with a pen-knife; whilst the inferior fragment is hard, compact, with a brown polished surface, and does not so readily yield to the edge of the knife.

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* Am. Jour. of Sci. and Arts. New series, Vol. 1, No. 2, p. 247.

† Vol. xliii., p. 390.

The superior fragment contains the three true molars and the last premolar. The seventh, or most posterior molar, is fully protruded and well developed, and the summits of its transverse eminences are worn sharp by trituration on their anterior surface. The penultimate molar has the enamel of its transverse eminences worn through, leaving two transverse irregularly outlined surfaces of exposed dentine. The antepenultimate molar, as usual in accordance with its order of development, is smaller, and more worn than the premolar preceding it. Its two transverse eminences are worn to their base, and the dentinal surfaces of each communicate by a narrow isthmus. The posterior premolar is but a little more worn than the penultimate molar. In comparing these teeth with those of two adult crania, of the recent Tapirus Americanus, in the Academy's collection, I find that although they almost correspond in their antero-posterior measurement, yet transversely they are somewhat larger, as may be observed by the following table:

Tapirus Americanus fossilis.

Molars.	Greatest transverse diameter.	Antero-posterior diameter
7th	1.15	1.1
6th	1.2	1.
5th	1.1	.9
4th	1.1	.8
	Recent T. Americanus, adult.	
7th	1.	.9
6th	1.1	1.
5th	.95	.85
4th	.95	.85

The malar process of the fossil fragment is considerably more elevated above the margin of the alveoli than in the recent specimens; thus in the former, from the margin of enamel on the neck of the penultimate molar to the malar process at its posterior part where it enters into the composition of the orbito-temporal fossa, it measures 1.3 in., whilst in the latter, from corresponding points, it measures only .65 in. In the former also, the process curves upwards and outwards, whilst in the latter it forms a curve outwards, moderately upwards and downwards.

It also projects on a line posterior to the anterior transverse eminence of the last molar, and not at the dividing line between the sixth and seventh, as in the recent crania.

The floor of the orbit is considerably more elevated than in the recent specimens, being 1.9 in. above the enamel margin upon the neck of the penultimate molar; in the other being 1.1 in. only.

The depth of the orbital fossa, as formed by the orbitar process of the maxillary bone, has been the same in both the fossil and recent animal; but the outer edge in the former is elevated into a smooth rounded ridge, which either formed the inferior edge of the orbit, or else bounded an external smooth groove about two lines in depth and width, along the line of the maxillo-molar suture in the recent cranium; while in the latter, the edge of the orbit is formed by the malar bone, and presents no groove internally along the sutures, except at its anterior part, just external to the entrance of the infra-orbitar canal. The malar articulating surface in the fossil, is therefore not only external to, but

several lines below the external edge of the orbitar process of the maxillary bone. This surface is also directed a little more outwards, as it proceeds backwards, than in the recent crania.

The line of the malar articulation would cause the head to appear somewhat broader opposite the temporal fossæ, and the elevation of the malar process, and of the orbit, would probably make the posterior part of the face appear higher in the fossil than in the recent animal. But the differences which I have pointed out, especially the generally vertical increase of diameter of the superior maxillary bone in the fossil specimen, may probably be dependent upon the advanced age of the individual, and the excessive development of the roots of the molars, which is a common occurrence in some animals, after the body of the tooth has been nearly worn down, as in the horse, &c.

The left half of the inferior maxilla has the condyle, all the margin of the bone below and posterior to it, and the coronoid process, broken off. As observed by Dr. C., it belonged to an individual "just attaining to adult age," as is indicated by its being about to lose the last of the temporary teeth, to be replaced by the third permanent premolar, which latter, in the specimen, is exposed from the former having been broken away. The sixth molar, or last true molar, is not wanting, as supposed by Dr. C., but has not yet protruded from the jaw. The roots only of the canines exist in the specimen. The incisors, except a fragment of the root of the right internal one, as well as the exterior of the alveoli are broken away; traces only of the alveoli of the lateral or most external incisors exist. I can observe no difference of character between the specimen and the recent jaw, except that the ridge occupying the interspace between the first premolar, and the canine, is not so strongly curved as in the latter, making them a very little, but to an unimportant degree, farther apart.

We have also in the collection of the Academy, the crown of a tooth of Tapirus Americanus fossilis, deposited by Dr. M. W. Dickeson, and found by him near Natchez, Mississippi. It is an inferior molar of the left side, apparently the third temporary molar. Its transverse eminences are worn to their base. Its proportions, and the fact of its being found associated with remains of Equus Americanus, Mastodon, &c., are sufficient to justify the opinion that it is fossil, and belonged to the same species as the inferior maxilla just spoken of.

Dr. Harlan, in his Fauna Americana,* has described the superior left molar tooth of a Tapir found in Kentucky, which he ascribes to a new species under the name of Tapirus mastodontoides. Upon comparing his description with the fossil fragments, and the recent specimens, I think there are not distinctive characters enough in it to distinguish it as a different species from the recent one, for the greater obliquity of the transverse eminences of the crown, and the slight variation in the form of the disks occasioned by attrition, appear to me to be nothing more than individual peculiarities.

* P. 224.

The monthly report of the Corresponding Secretary was read and adopted.

The Academy then, in accordance with the resolution adopted at the last meeting for business, proceeded to an election for a Recording Secretary and a Member of the Publication Committee, to supply the vacancies occasioned by the resignation of Dr. Gambel, with the following result:—

Recording Secretary.—Theodore F. Moss.

Member of Publication Committee.—Dr. Robert Bridges.

July 3d.

Vice President MORTON in the Chair.

Letters were read:

From William Jameson, Esq., dated Quito, May 1st, 1849, announcing that he was preparing for the Academy another collection of Plants from the Andes, more extensive and varied than that previously sent, and in which he designed to group the species, so as to illustrate in some degree the modifications produced by elevation.

From Dr. Michel, of Charleston, S. C., dated June 25th, 1849, stating his intention to furnish to the Society, some additional remarks on the reproduction of the Opossum, "having recently confirmed his opinion expressed in a former communication to the Academy, that this Marsupial, like the Kangaroo, described by Owen, has no placental connection whatever."

From the Librarian of the British Museum, dated 1st June, 1849 returning acknowledgments for late numbers of the Proceedings.

From Edward Blythe, Esq., dated Calcutta, April 18th, 1849, acknowledging the receipt of his notice of election as a Correspondent.

From the Academy of Natural Sciences of Breslau, dated 13th April, 1849, acknowledging the receipt of the Proceedings from May to September, 1848.

From M. Verreaux, dated Paris, April 14th, 1849, returning acknowledgments for his election as a Correspondent.

Dr. Hallowell read a description of a new species of Eryx (*E. maculatus*) from Madras, with a colored drawing of the same, intended for publication in the Proceedings, which was referred to Drs. Keller, Bridges, and Townsend.

Dr. Hallowell also stated that the Salamander described by him in the sixth number, Vol. IV., of the Proceedings (*Salamandra lugubris*,) was from the Sandwich Islands, and not from Upper California; the error having arisen from a false label attached to the bottle containing the specimen.